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CLAIMS

1. A MgCl₂•(EtOH)_m(ROH)_n(H₂O)_p adduct in which R is a C1-C15 hydrocarbon group different from ethyl, optionally substituted with heteroatoms containing groups, n and m are indexes, higher than 0, satisfying the equations (n+m)≥0.7 and 0.05 ≤n/(n+m)≤0.95 and p is a number ranging from 0 to 0.7 with the proviso that when R is methyl and (n+m) is in the range of 0.7 to 1, the value of n/(n+m) ranges from 0.05 to 0.45.

- 2. The adduct according to claim 1 characterized by the fact that (n+m) is higher than 1.
- 3. The adduct according to claim 2 characterized by the fact that (n+m) ranges from 2 to 5.
- 4. The adduct according to claim 1 characterized by the fact that the value n/(n+m) ranges from 0.1 to 0.4
- 5. The adduct according to claim 4 characterized by the fact that the value n/(n+m) ranges from 0.15 to 0.35.
- 6. The adduct according to claim 1 characterized by the fact that the index p ranges from 0.01 to 0.6.
- 7. The adduct according to claim 6 characterized by the fact that the index p ranges from 0.01 to 0.4.
- 8. The adduct according to claim 1 characterized by the fact that R groups are methyl or C3-C10 saturated hydrocarbon groups.
- 9. The adduct according to claim 1 characterized by the fact that the ROH alcohols are selected from the group consisting of methanol, propanol, isopropanol, butanol, secbutanol, tert-butanol, pentanol, 2-methyl-1-pentanol 2-ethyl-1-hexanol phenol, 4-methyl-1-phenol, 2,6-dimethyl-1-phenol, cyclohexanol, cyclopentanol.
- 10. The adduct according to claim 9 characterized by the fact that the ROH alcohol is methanol.
- 11. A catalyst component for the polymerization of olefins comprising the product obtained by contacting a transition metal compound of groups 4 to 6 of the Periodic Table of Elements (new notation) with an adduct according to anyone of the preceding claims.
- 12. The catalyst component according to claim 11 in which the transition metal is selected from titanium compounds of formula Ti(OR)_nX_{y-n} in which n is comprised between 0 and y; y is the valence of titanium; X is halogen and R is an alkyl radical having 1-8 carbon atoms or a COR group.
- 13. The catalyst component according to claim 12 in which the titanium compound is

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selected from TiCl₃, TiCl₄, Ti(OBu)₄, Ti(OBu)Cl₃, Ti(OBu)₂Cl₂, Ti(OBu)₃Cl.

- 14. The catalyst component according to claim 11 which further contains an electron donor compound.
- 15. The catalyst component according to claim 14 in which the electron donor is selected from the alkyl or aryl esters of mono or polycarboxylic acids.
- 16. The catalyst component according to claim 14 in which the electron donor is selected from 1,3 diethers of the formula:

$$\begin{array}{ccc}
R^{II} & R^{III} \\
R^{I} & OR^{VI} \\
R^{IV} & R^{V}
\end{array}$$
(I)

wherein R, R^I, R^{II}, R^{III}, R^{IV} and R^V equal or different to each other, are hydrogen or hydrocarbon radicals having from 1 to 18 carbon atoms, and R^{VI} and R^{VII}, equal or different from each other, have the same meaning of R-R^V except that they cannot be hydrogen; one or more of the R-R^{VII} groups can be linked to form a cycle.

- 17. The catalyst component for the polymerization of olefins according to claim 11 characterized by the fact that before being contacted with the transition metal compound, the adduct is subject to a dealcoholation treatment.
- 18. Catalyst for the polymerization of olefins comprising the product obtained by contacting a catalyst component according to one of the claims 11 to 17, and an aluminum alkyl compound.
- 19. The catalyst for the polymerization of olefins according to claim 18 in which the aluminum compound is an Al-trialkyl compound.
- 20. The catalyst for the polymerization of olefins according to claim 19 further comprising an external donor.
- 21. The catalyst for the polymerization of olefins according to claim 20 in which the external donor is selected from the silane compounds containing at least a Si-OR link, having the formula $R_a{}^1R_b{}^2Si(OR^3)_c$, where a and b are integer from 0 to 2, c is an integer from 1 to 3 and the sum (a+b+c) is 4; R^1 , R^2 , and R^3 , are alkyl, cycloalkyl or aryl radicals with 1-18 carbon atoms.

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22. Process for the polymerization of olefins of formula CH₂=CHR, in which R is hydrogen or a hydrocarbon radical having 1-12 carbon atoms, carried out in the presence of a catalyst according to one of the claims 18-21.